

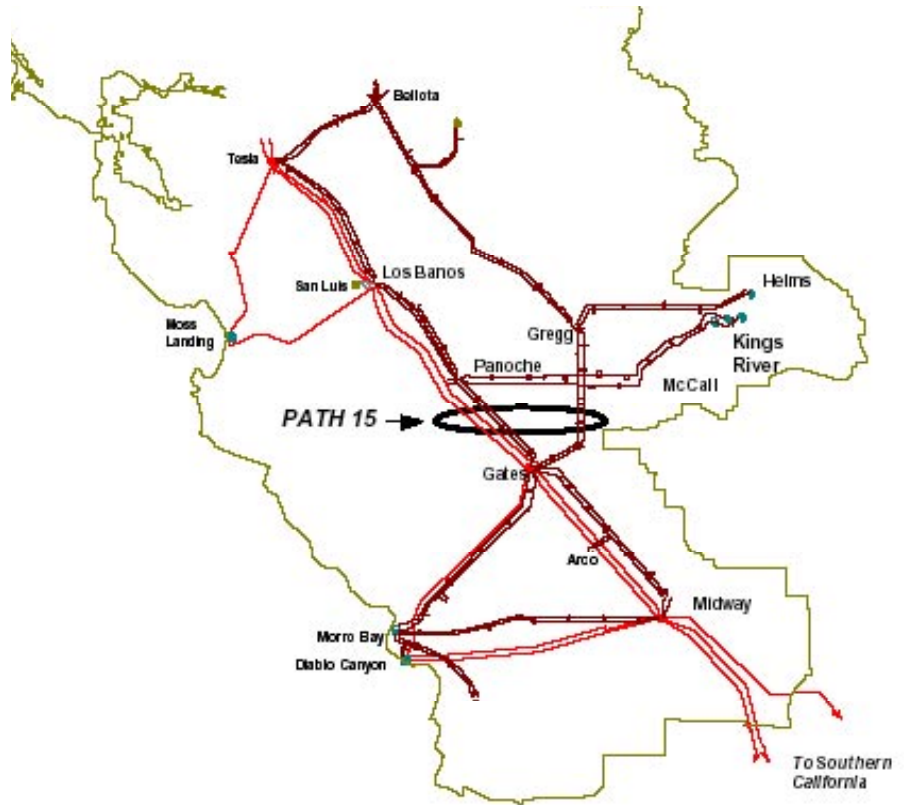
Path 15 Upgrade

Current facilities

Path 15 is located in the southern portion of Pacific Gas and Electric Company's service area and in the middle of the California Independent System Operator's Control Area. Path 15 is rated at 3,900 MW and consists of these lines:

- Los Banos-Gates 500 kV
- Los Banos-Midway 500 kV
- Gates-Panoche No. 1 230 kV
- Gates-Panoche No. 2 230 kV
- Gates-Gregg 230 kV
- Gates-McCall 230 kV

Capacity through this transmission corridor is insufficient to carry the necessary electricity load, especially during periods of high usage on the path. Building a third transmission line and other upgrades will allow about 1,500 megawatts (roughly enough to power 1.5 million households) of additional electricity to be transmitted across the state.



Map courtesy of Pacific Gas & Electric Company

Upgrade plan

The path upgrade will relieve constraints on the existing north-south transmission lines. The plan to increase the path rating is to:

- Construct a new 84-mile-long, 500-kV transmission line between PG&E's Los Banos and Gates substations.
- Modify the existing Los Banos and Gates substations to accommodate new equipment.
- Establish a second 230-kV circuit between Gates and Midway.

This plan will increase the non-simultaneous South-to-North path rating to 5,400 MW from the existing 3,900 rating.

Western Electricity Coordinating Council approved the South-to-North rating increase in February 2003 and is reviewing a North-to-South rating increase.

The project could become a model for relieving other transmission constraints throughout the country.

Project financing

The project will be financed substantially with non-Federal funds. Project participants are Western Area Power Administration, a Federal agency, Pacific Gas and Electric Company and Trans-Elect, Inc., under this public-private partnership.

PG&E will perform the substation and 115- and 230-kV system work and receive about 18 percent of the new transmission capacity. On Feb. 12, 2002, the U.S. Bankruptcy Court approved up to \$75 million for PG&E to upgrade its substations.

Western will complete all planning work, acquire land rights and manage the construction project. Western will retain a 10-percent share. Congress appropriated \$1.328 million in FY 2001 to fund project startup.

Trans-Elect will provide the remaining funding for the transmission line and own the remaining transmission rights (about 72 percent).

Estimated project cost is \$306 million.

System benefits

Upgrading Path 15 to remove transmission constraints is crucial to the reliability of power systems in California. In early 2001, Path 15 constraints limited the amount of power that could be shipped from Southern California and the Southwest to Northern California, resulting in rotating power outages in Northern California. Eliminating the potential for such outages is expected to benefit the state's economy.

In addition to enhancing reliability, the Path 15 upgrade will create a more robust electricity market in the West by permitting greater power transfers between southern and northern California, increasing the ability to use the least-cost source of power.

On Sept. 25, 2001, the ISO filed testimony with the California Public Utilities Commission supporting the need for the Path 15 Upgrade. The testimony stated it is "economically justified to reduce the risk of high prices associated primarily with the exercise of market power by strategically located generation and the existence of drought hydro conditions but also other factors such as the risk of a low level of new generation development in Northern California. An examination of historical congestion costs and studies undertaken by the ISO show that:

- 1) between September 1, 1999 and December 31, 2000, congestion on Path 15 cost California electricity consumers up to \$221.7 million; and
- 2) using reasonable assumptions, the \$300 million cost of upgrading Path 15 could potentially be recovered within one drought year, plus three normal years. Further, upgrading Path 15 is consistent with a broader strategy to put into place a robust high-voltage transmission system that supports cost-effective and reliable electric service in California and a broader and deeper regional electricity market."

ISO to assume operational control

PG&E and Trans-Elect will turn over the operational control of their entitlement in the project to the California Independent System Operator. Western will turn over the operational control of its share to the ISO if the ISO makes needed changes to its tariff, operational or other types of agreements to ensure Western's Central Valley Project transmission system is not affected.

The project will be operated following accepted utility practice as a transmission facility within the ISO control area.

Project status

Western released a solicitation for an Engineering, Procurement and Construction Contract for the transmission line work on Jan. 31, 2003.

Maslonka & Associates Inc., Mesa, Ariz., was selected in May 2003 for the \$87 million contract to construct the 84-mile, high-voltage transmission line.

PG&E awarded two contracts to Burns & McDonnell in June 2003 for the 500-kV substation modifications and the 230-kV shunt capacitor work. PG&E will perform all other work. Work will begin on the PG&E portion of the project in summer 2003 and will be substantially complete by June 2004.

The Coordinated Operations and Interconnection Agreement outlining coordination and interconnection of the Path 15 Upgrade with the existing PG&E electric system is being finalized. The project partners are also working on Transmission Control Agreements and Transmission Owner Tariffs necessary to turn over the operational control of these facilities to the ISO.

The project participants negotiated a Programmatic Agreement with the Native American tribes and state and Federal agencies spelling out consultation procedures and methods to protect historical and cultural resources and Native American cultural sites, including burial sites.

Western has acquired more than three-quarters of the necessary rights-of-way and is working to acquire the remaining property easements.

The U.S. Fish and Wildlife Service issued a Biological Opinion for the project in June 2003 and Western obtained other necessary permits.

Project timeline

Summer 2003—Construction begins

Late 2004—Line energized

Western's role as project manager

Western will:

- own the transmission line and 10 percent of the transmission rights in recognition of funding (\$1.328 million appropriated in FY 01) provided to date and other contributions as project manager.
- ensure the necessary negotiated project agreements are executed; that participants are actively involved in the process; and that participants cooperate to move the project forward. Western performed lead Federal agency efforts for the National Environmental Policy Act process and is acquiring necessary land rights.

Project history

Utilities in the 1980s recognized the potential for constrained power flows over Path 15 under certain conditions. Western, the Transmission Agency of Northern California and PG&E studied possible additions to relieve constraints as part of the planning for the California-Oregon Transmission Project.

In 1988, Western and others prepared an Environmental Impact Statement on a proposed Path 15 upgrade as part of COTP planning. The EIS concluded that Path 15 upgrades would produce no significant adverse environmental impacts. But for a variety of reasons, the Los Banos-Gates Transmission Project was not built.

The National Energy Policy, released in May 2001, recommended the Department of Energy take action to explore relieving the constraints on Path 15.

On May 28, 2001, U. S. Energy Secretary Spencer Abraham directed Western to complete the planning needed to relieve Path 15 constraints and determine whether investors would be interested in financing the upgrades.

Western received 13 responses to a Federal Register notice by the July 13, 2001, deadline and recommended nine of them as project participants.

The Path 15 Partnership; Kinder Morgan Power Co.; Mirant Americas Development Inc.; PG&E National Energy Group; Williams Energy Marketing and Trading Co.; and the Transmission Agency of Northern California withdrew at various times in the process.

Western issued a Supplement Analysis to the 1988 Environmental Impact Statement on Dec. 20, 2001 and a second Supplement Analysis addressing subsequent issues, such as transmission line realignment, in May 2003.

The CPUC issued a Final Environmental Impact Review on March 5 that found the proposed transmission corridor west of Interstate 5 is the environmentally superior alternative.

Participants signed a Letter Agreement and filed it at the Federal Energy Regulatory Commission on April 30, 2002. The agreement provides \$1.5 million in initial funding and outlines the overall terms and conditions for the project. FERC accepted the terms of the letter on June 12, 2002.

The California Independent System Operator's Board of Directors approved a Path 15 upgrade on June 23, 2002.

Trans-Elect provided \$1.5 million in initial funding on July 3, 2002, to finance preliminary work.

On Dec. 30, 2002, the project participants executed the Construction and Coordination Agreement. This document spells out the project terms and conditions in more detail than previous documents and provided an additional \$8.5 million to Western in initial funding.

On May 22, 2003, the California Public Utilities Commission granted PG&E's motion to withdraw its Application for a Certificate of Public Convenience and Necessity for Path 15 and found that the Final Supplemental Environmental Impact Report on the project can be used as the Environmental Impact Report, allowing PG&E to proceed with the project under federal authority with the principal project partners.

Project participants

Western is a Federal agency within the Department of Energy. It markets electricity from Federal water projects in a 15-state region of the West and manages more than 17,000 miles of transmission lines.

Pacific Gas and Electric Company is one of three California-based investor-owned utilities. PG&E delivers electricity and natural gas to 13 million consumers in northern and central California.

Trans-Elect is the nation's largest independent transmission company.